# Arboreta and Botanic Gardens

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# Gas from garden produces energy

Seven new 85-foot-deep gas wells have been installed in the northeast section of the South Coast Botanic Garden, further reducing problems caused by methane gas escaping from decomposing trash buried under the surface of the garden. Last fall the Sanitation Districts of Los Angeles County sank the 18-inch diameter plastic pipes into the landfill material.

Landfill gas is pumped out to prevent gas migration and the escape of odors from the landfill. Since the extensive system of gas collector wells has been in operation, complaints from visitors about odors have dropped drastically. Elimination of heat build-

up and gas vents has benefitted the garden horticulturally as well as aesthetically, making it possible to grow plants in areas that had long been kept barren by these decomposition byproducts.

The wells connect to collector pipes which in turn lead to the Districts' Palos Verdes gas-to-energy facility in Rolling Hills Estates. The facility burns the gas to produce steam

which is utilized to run a steam turbine. The turbine turns an electrical generator which produces electricity that is then sold to the Southern California Edison Company. About 7 percent of the total gas used at the facility originates at South Coast Botanic Garden, enough to generate electricity for approximately 1,000 homes, according to Sanitation Districts officials.

The gas recovery system at the garden is part of a gas-to-energy facility constructed and financed by Mitsui and Company (USA) Inc. at a total cost of about \$13.7 million. Lease payments are made to Mitsui from the energy sales revenue.



After being buried, these pipes will carry methane gas out of the garden.

## Director's corner

I'm pleased to report that recent action by the County Board of Supervisors will enable the Department to move forward on its marketing plans for the various gardens and has created the potential for increased revenue which, in turn, means less dependency on County budget allocation. The Department was granted authority to extend its open hours during the summer months to take advantage of daylight savings time, and also to gradually and selectively increase admission fees over the next three years, as well as the ability to offer presold group and tour ticket blocks. Also, the Board authorized the Department to expand the use of its facilities for outside activities and special events during normal public hours so

long as such use doesn't interfere with the public's enjoyment of the gardens. Previously, such activities had been restricted to nonpublic hours or in-

"I'm more confident than ever that the new year will bring many new and innovative changes to the gardens."

door facilities not normally open to the public.

In the last issue of Arboreta and Botanic Gardens we reported that the spring-fed lake at the Los Angeles State and County Arboretum had dried up due to the prolonged drought in Southern California. Steps are now well underway to replenish the water supply before the predicted wet winter. Arboretum crews have also been busy clearing excessive growth from the shoreline to open up the lake for more public enjoyment.

Arboretum crews are also busy renovating the Prehistoric/Jungle Section. Large amounts of overgrowth have been removed, pathways cleaned and cleared and other areas opened up to accommodate new planting. Several areas will be cleared to provide additional vistas. Thanks to a grant from the California Arboretum Foundation, a new roof was recently installed on the historic Santa Anita Depot. This

was a very timely project before the rainy season begins because, in the past, leaks have threatened some of the historic memorabilia inside the Depot. Also, a portion of the flat porch roof of the Queen Anne Cottage was replaced so, hopefully, that is also now leak-proof.

The South Coast Botanic Garden Foundation recently received an \$18,000 matching grant from the County Board of Supervisors to begin installation of a new rose garden. This is part of the Foundation's long-range master plan for improvement of the Garden, which had received official County approval in 1990. Other projects currently underway, and funded by the Foundation, include landscape

improvements of the entryway and a new tram waiting area.

A rare closure of the Arboretum and Descanso Gardens occurred

on Nov. 30. On Friday night the foothill areas were buffeted by externely high winds which continued into Saturday. While both facilities suffered only minor overall damage, the blowing debris and potential for breaking and falling branches made the facilities unsafe for visitors. This was the first such closure due to high winds in almost six years.

In closing, I want to express my appreciation for the cooperation, understanding and support I have received during the short time I've been here, not only from all the staff and volunteers, but also from the trustees of our various support groups, as well as the County Board of Supervisors. I'm more confident than ever that the new year will bring many new and innovative changes to the gardens.

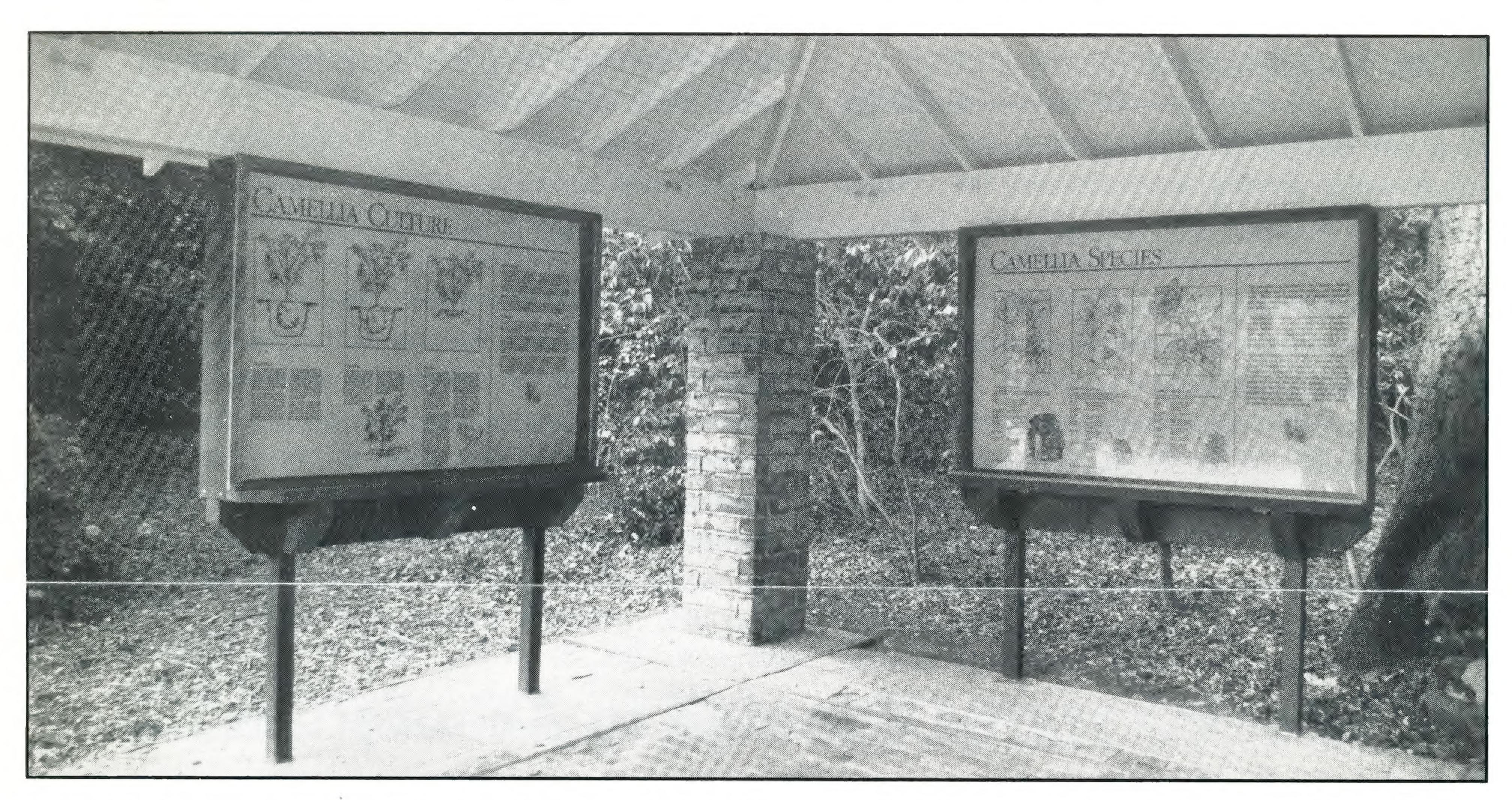
--- Ken Smith

# Camellia interpretive center opens at Descanso

The first formal interpretive facility at Descanso Gardens has been installed on the main lawn. A gazebo supported by brick pillars houses three 6 foot by 3 foot display cases with silk screened Lexan® panels.

The panels depict the history, species

and culture of camellias. Renovation of the gazebo and the panels were funded from private donations and the Descanso Gardens Guild. As additional funds become available, three additional panels will be developed. The interpretive center was dedicated on Jan. 18.



Panels in Descanso's new interpretive center brief visitors on the history, species and culture of camellias.

# Seminar will offer tips on rose culture

Rose expert Tom Carruth will share his knowledge during an afternoon seminar Mar. 8 at Descanso Gardens.

Among the topics he will explain are timing a bloom cycle by pinching, getting more blooms by fertilizing, controlling pests and diseases, and selecting the best roses for this area. He will also share some secrets on hybridizing and rapid grafting techniques.

Mr. Carruth is a hybridizer for Weeks Roses, one of the leading wholesale suppliers of roses in the United States. He is responsible for such acclaimed roses as 'Heart-breaker,' 'Crystalline,' 'Columbus,' 'Fire 'N Ice,' 'Origami,' 'Little Paradise' and 'Peach Fuzz.' An avid horticulturist, he grows more than 50 varietieies of roses and many hundreds of other plants in his spectacular garden.

Preregistration is recommended. Call the Guild at (818) 790-5414. The cost of \$15 includes light refreshments. The seminar is sponsored by the Descanso Gardens Guild, and proceeds will be used for Descanso's International Rosarium, the new 5-acre rose garden complex now underway.

### Vintage irises will bloom at Robinson Gardens this spring

More than 70 varieties of iris including heritage and historic cultivars from the 1920s and '30s are now growing at the Virginia Robinson Gardens. Planted last fall in front of the house in the perennial beds and near the pool pavilion, the irises should be established in time for the peak blooming period of March and April.

The irises, a favorite flower of Mrs. Robinson, are the start of a historical garden that will feature perennials and other flowers popular during the Robinson era. Other heirloom cultivars of iris, started by John Copeland, supervisor of the Robinson Gardens, will also be part of the collection which is a "great addition and appropriate to the period," he said.

Most of the irises were donated by Jim Puckett of Blooming Fields Farm in Riverside. He also helped Mr. Copeland plant the irises. By displaying the mass of cultivars in such an appropriate setting, Mr. Puckett

hopes to revitalize the popularity of this nostalgic garden favorite. "This is a significant donation, and I'm very grateful for his help in planting," said Mr. Copeland.

Mr. Puckett opened Blooming Fields Farm about 2 1/2 years ago, when he moved from Colorado where he had been a grower for 10 years. He works to arouse interest in the iris through displays at garden centers, plant sales and flower shows.

"Nothing will happen if I just print a catalog and sit back and wait," he said. His displays at Roger's Gardens in Corona del Mar, The Crystal Court in South Coast Plaza and the Green Scene Plant Sale at the Fullerton Arboretum for the past two springs allow visitors to see the many different color combinations and flower shapes available.

Mr. Puckett will also participate in Descanso Gardens' Spring Festival of Flowers show in March where he will plant a 12 by 14 foot display of tall bearded irises.

### Anoakia statue donated to Arboretum

A 7-foot tall, white marble statue commissioned by Anita Baldwin has been moved to the Los Angeles State and County Arboretum. A crane lifted the statue, valued



Workers remove protective wraps from statue.

at about \$100,000, into the new sculpture garden west of the waterfall on Nov. 22.

Lowry B. McCaslin donated the white marble figure in memory of his friend Richard A. Grant Sr., father of the president of the California Arboretum Foundation Board of Trustees, Richard A. Grant Jr. Included in his gift was a check for \$3,000 to help defray the cost of moving the sculpture to the Arboretum from the Anoakia estate grounds.

The sculpture by French artist Louis Aim'e Lejeune is titled *Je N'Oublierai Pas*. The phrase, which translates as "I will not forget," appears on the Baldwin family crest carved on the pillar supporting the urn beside the female figure.

The acorns also depicted on the crest symbolize an important part of Baldwin family lore. The oak grove on Tallac Knoll at the Arboretum still stands because E.J. Baldwin would not allow the trees to be cut. According to Julian Fisher, who grew up on the ranch, there were only three ways to be fired at the Baldwin Ranch. One way was to mistreat a horse, the second was to kill a peacock, and the third was to cut down an oak tree.

As a tribute to her father, Anita not only incorporated "oak" into the name of her estate, Anoakia, but also mandated protection for the trees when she subdivided the

property many years later.

Mr. Lejeune's work was greatly appreciated by his contemporaries and was collected by the New York Metropolitan Museum of Art and the Brooklyn Museum. In 1926 he traveled to California to complete a portrait bust commissioned by Horace Huntington. Anita Baldwin, known as a patroness of the arts, commissioned Mr. Lejeune to do the Arboretum's statue in 1930. The year before he had cast the bronze fountain still at the entrance to Anoakia.

# Springtime tours offered at South Coast

After several years of planning and planting, South Coast Botanic Garden has developed a spring display of flowering fruit trees throughout the 67-acre grounds.

"Springtime comes early at South Coast," says Takao Niiya, supervisor of the garden, "and we finally have a real show this season after years of effort."

Flowering fruit trees like cherry, peach and crabapple with their billows of delicate petals will all be blooming in March. 'Pink Cloud', a cultivar of the Japanese flowering cherry,

produces single, medium-sized flowers without winter chilling. The flowering nectarine 'Alma Stultz' will also be displaying clouds of fragrant, rosy-white flowers. Another feature will be 2,000 'King Alfred' daffodils spreading a carpet of golden flowers on the main lawn.

Weekday tram tours are available for groups during the peak spring blooming season in March. Reservations must be made in advance and will be cancelled in case of bad weather. Call (310) 544-6815.

### Winds force Arboretum and Descanso to close for a day

At right, plant propagator Mary Abney straightens cans in the nursery tumbled by winds on Nov. 30. Although both Descanso Gardens and the Arboretum suffered only minor damage, the gardens were closed on the Saturday following Thanksgiving to protect visitors from flying debris. Both gardens reopened the next day, although cleanup efforts continued through the next week.



# Green treasures emerge from dry lake

by Suzanne Granger

The body of water on the grounds of the Los Angeles State and County Arboretum has been called LASCA Lagoon by some or "the lake where the ducks are" by most visitors. But it is, in fact, a sag pond formed by the Raymond Fill Fault. When five years of drought depleted the aquifers that recharged it, the pond dried up, presenting the opportunity to study pond succession.

Pond succession, the orderly waves of plants that colonize newly opened habitat, has been well documented for northern montane ponds. Little has been done, however, with bodies of water in urbanized areas. The typical scenario shows amphibious plants—cattails and tule reeds are examples—appearing first, followed by pioneer weedy annual herbs that prepare the habitat for trees and shrubs colonizing from drier areas nearby.

Because of this dynamic natural process, the ancient Indian charm stone uncovered by Glen Erik Klevdahl was not the only treasure revealed by the drying pond bed in mid-October. My volunteer,

#### First rains flood lakebed

December rains that partially refilled the lake at the Los Angeles State and County Arboretum gave new hope for the New Year. Arboretum officials have their fingers crossed for 1992.

"We are pleased to see that the first heavy rains of the winter season put so much water into the lake," said Arboretum Superintendent John Provine. "When the lake went dry last summer we were afraid that it might be a permanent condition."

A normal rainy season this year may refill the aquifers that feed the lake, preventing a replay of last summer's disappearing lake episode. Lois Taylor, and I found "green treasures," aka unusual plants, sprouting up from the mud.

What interested me most were the original plant pioneers and how they got here. The plants we call "weeds" are usually hardy plants with many admirable traits. They are the first plants to grow when a new habitat opens up, such as happened when the shrinking pond exposed bare soil for the first time in decades. Pioneer plants thrive on disturbance and tolerate a wide range of environmental conditions—poor soil as well as temperature, insolation and moisture extremes—while producing tremendous quantities of seed or spores. Those weeds that manage to find their way all over the world are called "cosmopolitan" species, the ultimate success symbol of weeddom.

#### Three sources

Three major sources for the pioneer plants we observed soon became evident: first, seeds from wild bird mixes brought in by visitors and, second, those brought by migrating water birds on the Pacific Flyway. The third, and the least interesting source, were those pesky weeds already known as problems at the Arboretum.

Plants from bird seed mix were concentrated near the pond edges and sandier soil where visitors fed the ducks. Broadleaf plantain (*Plantago major*) is native to Europe, but this pioneer has become cosmopolitan. It is so successful partly because its mucilaginous seeds (psyllium) have long been used medicinally by northern Europeans who brought it west with them. Native Americans called plantain "white man's foot" because it was said to spring up wherever he walked.

Seeds of safflower or false saffron (Carthamnus tinctorius) are relished by birds and yield safflower oil. This beautiful plant with fragrant yellow to orange flowers would be very much at home in the Herb Garden. Safflower probably originated in Eurasia, but it proved so useful that migrating humans and birds made it a cosmopolitan plant. Today, no one can be certain of its origin.

Sunflower (Helianthus annuus) is a favorite snack food of countless birds as well as grounds worker Bill Fry, so it's uncertain who is responsible for the many sunflowers growing in the pond bed—Bill or the birds. Other seeds from bird mixes which germinated included Indian corn (Zea mays) and sorghum (Sorghum vulgare), both cultivated since prehistoric times. An abundance of associated grasses indicates that bird mixes are made up of mostly grass seed. One lanky cabbage was spotted before peacocks, the Arboretum's worst weeds, tattered it. I also found amaranthus.

The bird-dispersed category provided an exciting green treasure with a new species site record for Southern California. A specimen of swamp grass (Heleochloa schoenoides) will be sent to Berkeley to be included in the newest "Jepson Manual of California Flora," with the Arboretum listed as the locality. The grass was found near the middle of the pond and was apparently carried from the rice paddies of the Sacramento Valley by migratory water birds. The species, native to Europe, was brought to America's east coast in ships' ballast. By 1935, swamp grass had wandered from New England to Illinois. It extended its range to northern California by 1965, and made its Southern California debut at the Arboretum in 1991. Goose grass (Eleusine indica) was also collected and boasts a similar history of pioneering success, but it has been here for some time.

Among the weeds already here were many like the Mexican tea (*Chenopodium ambrosiodes*) that were once invited into the Arboretum and now refuse to leave. Others include Indian shot (*Canna indica*), Pennsyl-



This specimen of swamp grass (Heleochloa schoenoides) will be included in the newest "Jepson Manual of California Flora."

vania smartweed (*Polygonum pensylvanicum*), papyrus (*Cyperus papryus*) and bullrushes or tules (*Scirpus*). It was interesting to note that only one sickly seedling of passion vine (*Passiflora coerulea*), perhaps the Arboretum's most ubiquitous weed, was found during two months of collecting pond bed specimens.

#### Primitive pioneers

Not all the pioneers were flowering plants. As Lois and I walked on the drying mud in mid-November, we heard a crunching sound as if we were walking on potato chips. The source proved to be a primitive plant, the terrestrial unicellular alga (*Botrydium*), that thrives on muddy banks and shores. Millions of them, looking like tiny green balloons tied to strings, were shallowly embedded in the mud. With thick skins surrounding a gelatinous green cytoplasm, the cells burst with an

audible pop when trod upon. I called them "spores from Mars" until librarian Joan DeFato helped me identify them. Another primitive plant was a common moss (Funaria hygrometrica) growing happily in an uncommon habitat—a foot down along the sides of the deep fissures that had developed in the adobe clay lake bed.

The dried pond bed also provided a rich habitat for animals, attracting many kinds of songbirds. Most noticeable were the mockingbirds which were especially active in devouring the remaining water snails that tried to survive the drought by hiding deep in the damp mud cracks. Red whiskered bulbuls are also active pioneers. Native to Vietnam, they made their way to California from Florida where captive birds were released in 1960. Although these pretty songbirds eat fruit, they are no longer considered Class A pests by the County Agricultural Commission.

But the dry phase of Nature's cycle

seems just about over—for now. Even though only one-tenth of an inch of rain has officially fallen at the Arboretum according to plant recorder Jack McCaskill, the wet cycle is returning.

By Nov. 10, water was welling up in mud cracks to within two inches of the surface, and in places the mud quivered like jelly underfoot. How could so little rain cause this? The aquifers which feed the pond accumulate rain water from a large area, including the San Gabriel Mountains which always rake more moisture out of the storm clouds than the lowlands. So this may signal the end of what to some looked like a disaster but was actually just another phase in nature's cycle, one that opened up new habitats for species waiting in the wings.

As leader of the mapping crew, herbarium curator Suzanne Granger monitors the plant collections at the Los Angles State and County Arboretum through all the seasons, wet or dry.

# New roof installed on Santa Fe Depot



The roof of the Santa Fe Depot was stripped to the rafters and new materials installed last fall.

# Arboretum acorns to reforest Arroyo Seco

Offspring of the oaks on Tallac Knoll at the Los Angeles State and County Arboretum may soon help reforest the Arroyo Seco in Pasadena. Volunteers from the Arroyo Seco Council gathered acorns from the trees last October.

The Council plans to work with the US
Forest Service to develop a demonstration
watershed management program to promote
habitat restoration, non-structural flood control, reforestation, soil stabilization and rainfall
retention. Arboretum herbarium curator
Suzanne Granger and botanist Allen Howard
are consultants for plant selection and planning
of the "re-naturalization" of the Arroyo Seco.

Each year the Council gathers acorns from local trees and places them in their nursery at the Forest Service Ranger Station in Oak Grove Park in Pasadena. Last fall they planted about 2,000 seedlings from the 1990 harvest near the Devil's Gate Dam area in the Arroyo Seco.



From left: David Morse, Holly Nobell and Ann Carlton inspect acorns gathered at Arboretum.

# Statue dedicated to Bill Hager

William Hager was honored on Oct. 7 for contributing 10,000 hours of service in the Garden for All Seasons at the Los Angeles State and County Arboretum. His wife, Mary, fam-

ily and more than 50 of his friends among the Arboretum staff and Las Voluntarias attended the ceremony. To honor Bill, a small garden statue bearing a plaque dedicated to him was placed in the muchvisited demonstration garden.

Bill's horticultural expertise and constant presence in the volunteers' demonstration garden have been missed since poor health forced him to retire last summer. A native of Germany, Bill has worked with plants nearly all his

life, establishing his own nursery in Alhambra more than 50 years ago. Bill and Mary Hager have been Arboretum volunteers since 1978.



Friends surround Bill and Mary Hager at the ceremony honoring him.

# Gardens celebrate Christmas

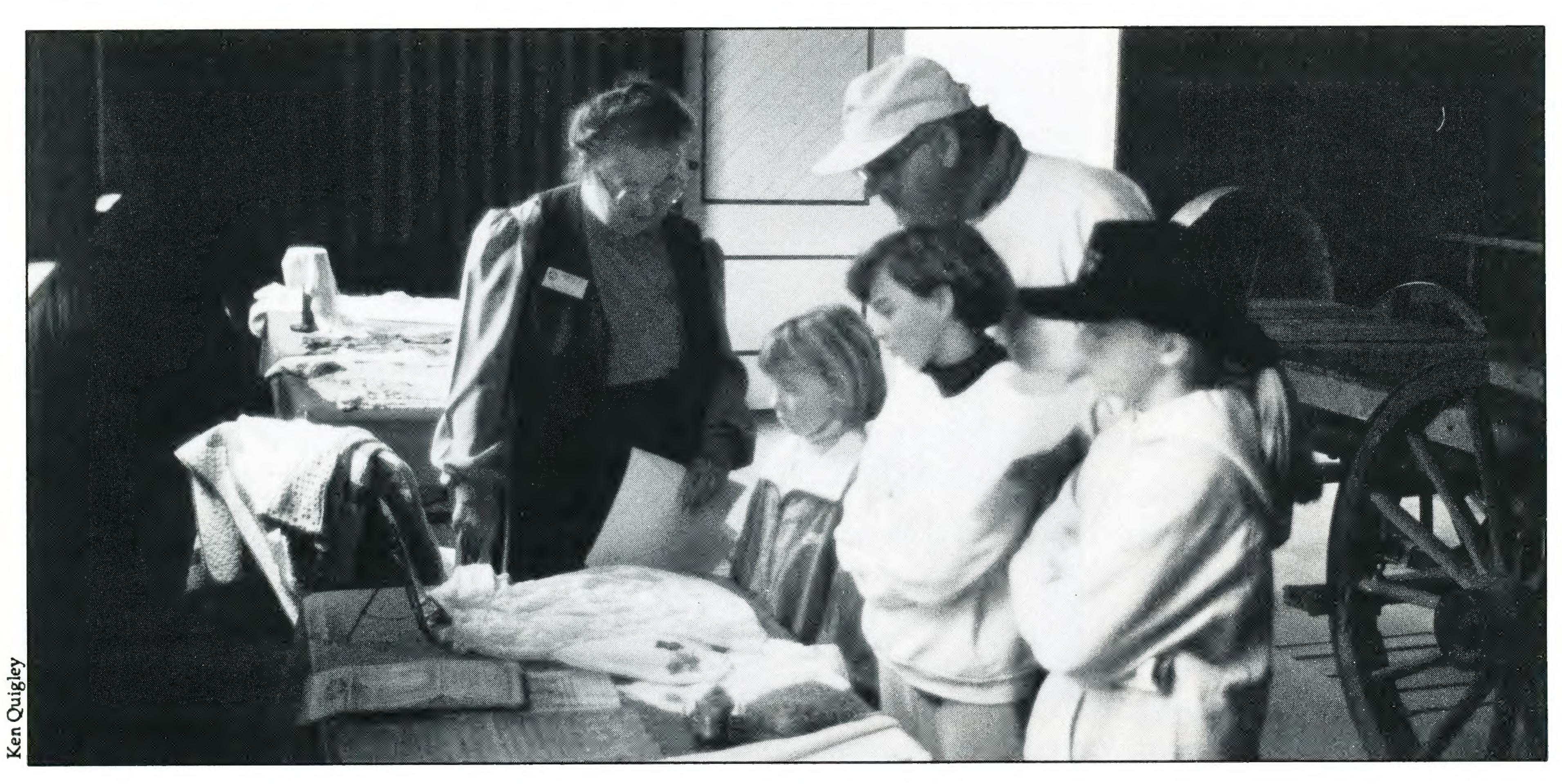


(Above) Visitors to the Descanso Gardens Christmas Show glean home decorating ideas from the craft displays in Van de Kamp Hall.

(Right) Children from ERES School for the Developmentally Disabled learn planting tips from two Teenage Mutant Ninja Turtles during their Christmas party at Robinson Gardens.

(Below) Volunteer Betty O'Neill, left, explains the antique textile display in the Coach Barn at the Arboretum to visitors during the Christmas Open House Dec. 7 and 8.





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# Stenciled ceiling restored at Robinson Gardens

Restoration of Virginia Robinson's stenciled ceiling beams in the pool pavilion is almost complete. Started last year, the project also included replacing balustrade units that separate the main lawn and lilypond from the swimming pool. The restoration is being done by architectural conservator J. Ronald Reed under the direction of Ray Girigian, F.A.I.A.

Built in 1924, the pool pavilion ceiling had been decorated with a stenciled design of foliage and flowers. In the 1950s, latex paint was applied to the ceiling which damaged the design. Water and age have also contributed to the deterioration.

The panels between the beams will be gilded while the walnut-shaded beams will be restenciled with red, white and blue patterns in whimsical Moorish designs. Mr. Reed is using different types of paints to recreate the look of the 1920s.

The recent winter rains caused a delay when they exposed a leak in the new roof that had to be fixed before work could continue. Friends of Robinson Gardens funded the \$40,000 project with Los Angeles County 1:1 matching the cost.



Artisans restencil Moorish designs on ceiling beams.

#### 8,000 roses slated for new South Coast attraction

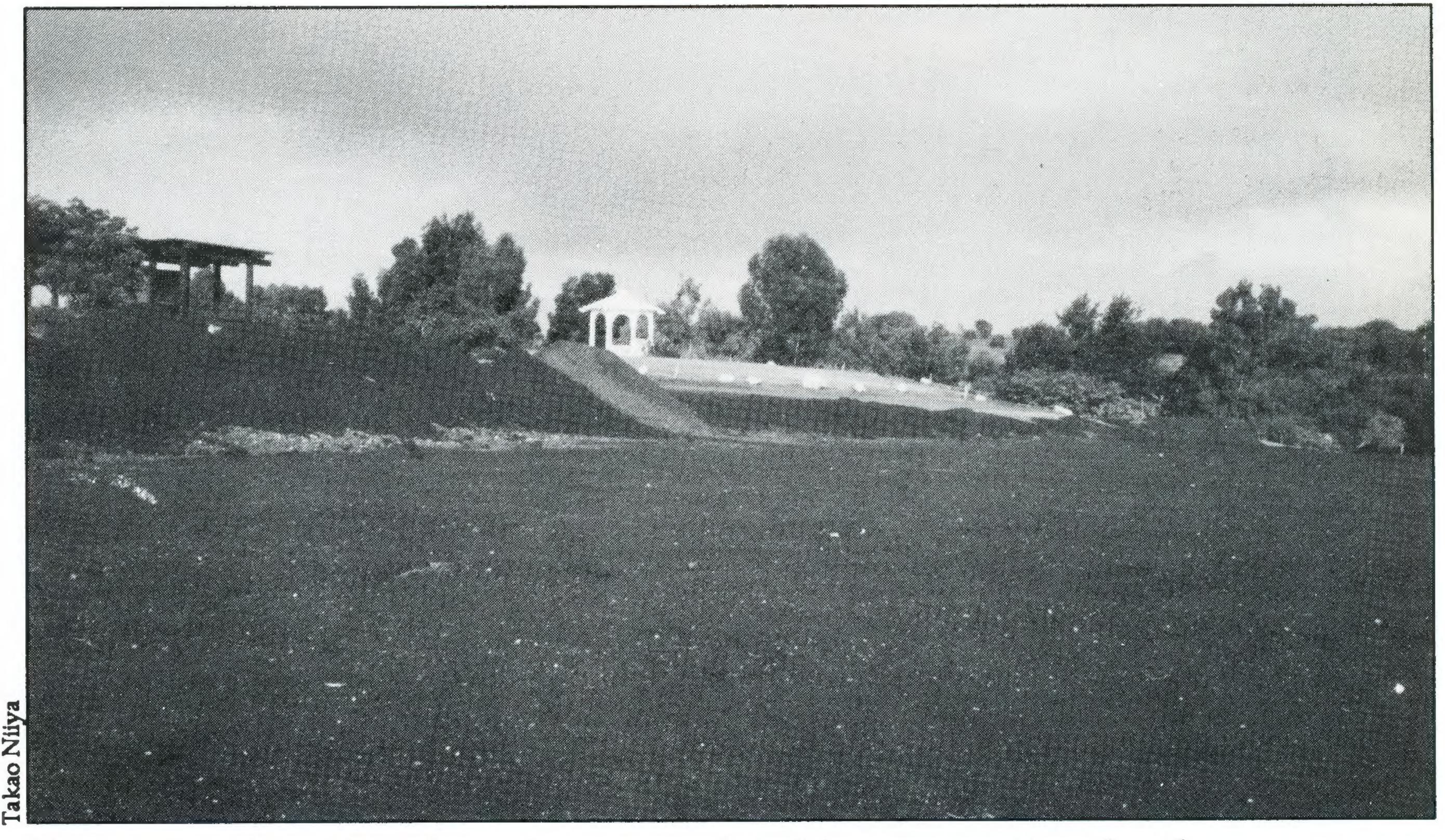
Thousands of roses will soon bloom in South Coast Botanic Garden's new rose garden. The bushes are being planted in sweeping arcs on the slope near the wedding gazebo on the main lawn. An irrigation system will be installed by late January as

soon as the weather clears enough to dig the trenches.

When the 2-acre project is completed in March, it will reflect the efforts of many individuals and organizations. Los Angeles County provided a matching grant program of \$18,000. The South Coast Botanic Garden Foundation paid the entire cost of clearing, renovating and grading the area as well as raising funds for the 8,000 rose bushes.

About 300 cubic yards of a special planting mix was donated by Kelloggs Supply, Inc.

Telephone Pioneers of America, a group of retired telephone company employees who have tackled several projects at SCBG, replanted rose bushes salvaged from the old rose garden.



Clearing and grading have been completed in preparation for the roses.

### GARDENENTS

### February, March, April 1992

#### South Coast Botanic Garden, Palos Verdes Peninsula

February 2 — 2 p.m.

Belize Lecture by Edward Grave

February 8 - 9 — Sat. 11 a.m. to 5 p.m., Sun. 10 a.m. to 4 p.m. South Coast African Violet Society Show

February 16 — 2 p.m.

Magic Box Demonstration by Sid Horton

February 23 — 2 p.m.

Fuchsia Pruning Demonstration by Ida Drapkin

March 1 — 2 p.m.

African Plant Material Slide Show by Sue & Steve Soldoff

March 8 — 2 p.m.

Cactus Lecture by Woody Minnish

March 15 — 2 p.m.

Judging Herbs Demonstration by Gudrun Kimmel

March 21 --- 10 a.m. to 3 p.m.

Equinox Science Expo

March 22 — 2 p.m.

Flower Arranging Demonstration by Gudrun Kimmel

March 29 — 2 p.m.

South Coast Dahlia Society Planting Demonstration

April 5 — 2 p.m.

Palos Verdes Symphonic Band Outdoor Concert

April 11 - 12 — Sat. noon to 5 p.m., Sun. 9 a.m. to 4 p.m.

South Coast Cactus and Succulent Society Show

April 19 — 2 p.m.

Mission Indian Lecture by Kirby Davis

April 26 — 10 a.m. to 4 p.m.

South Bay Epiphyllum Society Show and Sale

#### Los Angeles State and County Arboretum, Arcadia

February 1 - 2 — 10 a.m. to 5 p.m.

Mid Valley Arts League Show

February 15 - 16 — Sat. 1 p.m. to 4:30 p.m., Sun. 9:30 a.m. to 4:30 p.m.

Temple City Camellia Society Show

February 29 - March 1 — 9 a.m. to 5 p.m.

San Gabriel Valley Orchid Hobbyists Inc. Show

March 7 — 1 p.m. to 5 p.m.

Pasadena East Kiwanis Club "Growing Auction"

March 14 — 9 a.m. to 4 p.m.

Environmental Education Fair

April 4 - 5 — 9 a.m. to 4:30 p.m.

Shohin Bonsai Society of Southern California Show

April 11 - 12 — Sat. 1 p.m. to 4:30 p.m., Sun. 9 a.m. to 4:30 p.m.

Southern California Iris Society Show

April 18 - 19 — Sat. noon to 4:30 p.m., Sun. 10 a.m. to 4:30 p.m. Southern California Hemerocallis and Amaryllis Society

April 25 - 26 — Sat. 1 p.m. to 4:30 p.m., Sun. 10 a.m. to 4:30 p.m.
Pacific Rose Society Show

#### Descanso Gardens, La Canada Flintridge

February 8 — 9 a.m. to 3 p.m.

Versatile Rose Seminar

February 29 - March 1 — 9 a.m. to 4:30 p.m.

Southern California Camellia Council Show

March 14 - 15 — Sat. 1 p.m. to 4:30 p.m., Sun. 9 a.m. to 4 p.m. Southern California Daffodil Society Show

March 21 - 22 — 9 a.m. to 4 p.m.

Southern California Flower Arrangers Guild Show

April 4 — 9 a.m. to 4 p.m.

Camellia Pruning Demonstration

April 11 - 12 - 10 a.m. to 4 p.m.

Horticultural Fair

April 18 - 19 -- Sat. noon to 4:30 p.m., Sun. 9 a.m. to 4 p.m. San Fernando Rose Society Show



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Los Angeles State & County Arboretum 301 North Baldwin Avenue Arcadia, CA 91007-2697

Descanso Gardens 1418 Descanso Drive La Canada Flintridge, CA 91011

South Coast Botanic Garden 26300 Crenshaw Blvd. Palos Verdes Peninsula, CA 90274

> Virginia Robinson Gardens Beverly Hills, CA 90210

#### ARBORETA AND BOTANIC GARDENS

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> LuAnn B. Munns, Editor (818) 821-3214